

Amendments to the Claims:

Claims 1-30 are pending in this application. Please amend claim 24 as follows:

- 1 1. (original) A system for wirelessly activating an appliance, the
- 2 appliance responding to one of a plurality of transmission schemes, the system
- 3 comprising:
 - 4 a transmitter operative to transmit a radio frequency activation signal
 - 5 based on any of the plurality of transmission schemes;
 - 6 at least one user activation input, each activation input identifying a
 - 7 wireless channel;
 - 8 a user programming input;
 - 9 memory holding data describing a plurality of rolling code
 - 10 transmission schemes and a plurality of fixed code transmission schemes; and
 - 11 control logic in communication with the transmitter, the at least one
 - 12 user activation input, the user programming input and the memory, the control logic
 - 13 implementing a rolling code programming mode, a fixed code programming mode
 - 14 and an operating mode;
 - 15 the control logic in rolling code programming mode generating and
 - 16 transmitting a sequence of rolling code activation signals, each rolling code activation
 - 17 signal in the sequence of rolling code activation signals based on a different one of
 - 18 the plurality of rolling code transmission schemes, until user input indicates a
 - 19 successful rolling code transmission scheme, the control logic storing data specifying
 - 20 the successful rolling code transmission scheme associated with one of the at least one
 - 21 activation inputs;
 - 22 the control logic in fixed code programming mode receiving a fixed
 - 23 code from the user programming input then generating and transmitting a sequence
 - 24 of fixed code activation signals, each fixed code activation signal in the sequence of
 - 25 fixed code activation signals based on one of the plurality of fixed code transmission
 - 26 schemes and each transmitting the received fixed code, until user input indicates a
 - 27 successful fixed code transmission scheme, the control logic storing the fixed code

28 and data specifying the successful fixed code transmission scheme associated with one
29 of the at least one activation inputs;

30 the control logic in operating mode receiving an activation input,
31 retrieving data associated with the received activation input, and transmitting an
32 activation signal based on the retrieved data.

1 2. (original) The system of claim 1 wherein the at least one activation
2 input is a plurality of activation inputs.

1 3. (original) The system of claim 2 wherein each of the plurality of
2 activation inputs comprises a switch and the user programming input comprises the
3 same plurality of switches.

1 4. (original) The system of claim 1 wherein the fixed code is
2 parallelly received.

1 5. (original) The system of claim 1 wherein the fixed code is serially
2 received.

1 6. (original) The system of claim 1 wherein the control logic pauses
2 for user input after transmission of at least one fixed code activation signal in the
3 sequence of fixed code activation signals.

1 7. (original) The system of claim 1 wherein the control logic pauses
2 for user input after transmission of at least one rolling code activation signal in the
3 sequence of rolling code activation signals.

1 8. (original) The system of claim 1 wherein membership in the
2 transmitted sequence of fixed code signals is based on the number of bits in the
3 received fixed code.

1 9. (original) The system of claim 1 wherein the sequence of fixed
2 code signals comprises at least one pair of fixed code activation signals based on the
3 same fixed code transmission scheme, one fixed code activation signal in each pair
4 based on a reversal of the fixed code.

1 10. (original) The system of claim 1 wherein the sequence of fixed
2 code signals comprises at least one pair of fixed code activation signals based on the
3 same fixed code transmission scheme, one fixed code activation signal in each pair
4 based on an inverse of the fixed code.

1 11. (original) The system of claim 1 wherein at least one of the
2 sequence of fixed code signals and the sequence of rolling code signals is ordered
3 based on a popularity of schemes, thereby reducing an average latency time until user
4 input indicates a successful scheme.

1 12. (original) The system of claim 1 further comprising a data port
2 for receiving the data describing the plurality of rolling code transmission schemes
3 and the plurality of fixed code transmission schemes.

1 13. (original) The system of claim 1 further comprising means for
2 modifying the data describing the plurality of rolling code transmission schemes and
3 the plurality of fixed code transmission schemes.

1 14. (original) The system of claim 1 further comprising a vehicle bus
2 in communication with the control logic.

1 15. (original) A method of activating an appliance, the appliance
2 controlled by a radio frequency activation signal, the method comprising:

3 if a user indicates that the appliance is activated by a rolling code
4 activation signal, transmitting a sequence of different rolling code activation signals
5 until the user indicates a successful rolling code transmission, then storing data
6 representing a rolling code scheme used to generate the successful rolling code
7 transmission;

8 if the user indicates that the appliance is activated by a fixed code
9 activation signal, using a fixed code word to generate and transmit each of a sequence
10 of different fixed code activation signals until the user indicates a successful fixed
11 code transmission, then storing data representing the fixed code word and a fixed
12 code scheme used to generate the successful fixed code transmission; and

13 in response to an activation input, generating and transmitting an
14 activation signal based on stored data.

1 16. (original) The method of claim 15 further comprising storing data
2 representing either the rolling code scheme used to generate the successful rolling
3 code transmission or the fixed code word and the fixed code scheme used to generate
4 the successful fixed code transmission associated with one of a plurality of activation
5 inputs.

1 17. (original) The method of claim 15 further comprising receiving
2 the fixed code word serially input by the user.

1 18. (original) The method of claim 15 further comprising receiving
2 the fixed code word parallelly input by the user.

1 19. (original) The method of claim 15 further comprising determining
2 which of a plurality of fixed code transmission schemes will be used in the sequence
3 of different fixed code activation signals based on a number of bits in the fixed code
4 word.

1 20. (original) The method of claim 15 wherein the sequence of
2 different fixed code activation signals comprises a first signal and a second signal, the
3 second signal based on the same fixed code scheme as the first signal and on a
4 reversal of the fixed code word.

1 21. (original) The method of claim 15 wherein the sequence of
2 different fixed code activation signals comprises a first signal and a second signal, the
3 second signal based on the same fixed code scheme as the first signal and on an
4 inversion of the fixed code word.

1 22. (original) The method of claim 15 wherein at least one of the
2 sequence of different fixed code activation signals and the sequence of different
3 rolling code activation signals is ordered based on a popularity of schemes.

1 23. (original) The method of claim 15 wherein the sequence of
2 different fixed code activation signals and the sequence of rolling code activation
3 signals are based on data held in memory, the method further comprising modifying
4 the data.

1 24. (currently amended) A method of programming a programmable
2 remote control, the remote control programmable to one of a plurality of appliance
3 activation schemes, the method comprising:

4 receiving user type input specifying activation signal type;
5 if the user type input specifies variable code type, transmitting variable
6 code activation signals using different appliance activation schemes until receiving
7 user success input indicating a target appliance has been activated;
8 if the user type input specifies fixed code type, receiving user fixed
9 code input providing a fixed code and transmitting fixed code activation signals using
10 different appliance activation schemes until receiving user success input indicating the
11 target appliance has been activated; and

12 storing information specifying an activation signal for activating the
13 target appliance based on the received user success input.

1 25. (original) The method of claim 24 further comprising receiving
2 data specifying characteristics of at least one of the plurality of appliance activation
3 schemes over a vehicle bus.

1 26. (original) A method of programming a programmable remote
2 control, the remote control programmable to a fixed code appliance activation
3 scheme, the method comprising:

4 receiving a fixed code associated with a fixed code appliance; and
5 transmitting at least a first activation signal and a second activation
6 signal, each of the first activation signal and the second activation signal based on the
7 same fixed code activation scheme, each of the first activation signal and the second
8 activation signal based on the received fixed code, the second activation signal based
9 on a binary modification of the received fixed code.

1 27. (original) The method of claim 26 wherein the binary
2 modification is a bitwise reversal of the received fixed code.

1 28. (original) The method of claim 26 wherein the binary
2 modification is a bitwise inversion of the received fixed code.

1 29. (original) A system for wirelessly activating an appliance, the
2 appliance responding to one of a plurality of transmission schemes, the system
3 comprising:
4 a radio frequency transmitter;
5 memory holding data describing the plurality of transmission schemes;
6 and

control logic in communication with the transmitter and the memory,
the control logic operative to

- (a) store a fixed code,
- (b) if a fixed code is stored, transmit a sequence of fixed code activation schemes, based on the fixed code and data held in the memory, until input indicating activation of the appliance is received,
- (c) if no fixed code is stored, transmit a sequence of rolling code activation schemes, based on data held in the memory, until input indicating activation of the appliance is received,
- (d) store an indication as to which activation scheme activated the appliance based on the received input indicating activation of the appliance, and
- (e) generate an activation signal based on the stored indication and a received activation input.

1 30. (original) The system of claim 29 wherein the control logic is
2 further operative to receive the data describing the plurality of transmission schemes
3 and store the received data in the memory.